## FACULTY MENTOR
Cosman, Pamela

## PROJECT TITLE
Using eye-tracking glasses to quantify looks in social interactions

## PROJECT DESCRIPTION
Together with Dr. Leanne Chukoskie, Prof. Pamela Cosman is developing tools for determining "looks" to faces and objects during realistic social interactions, using eye-tracking glasses. We want to be able to determine, for example, the latency between a trigger (a knock on the door, or saying a person's name) and the onset of a gaze directed at the door or at a person's face. The current system uses the faster-RCNN neural network for object detection, and then processes run lengths of detected objects to determine "looks." This project aims to improve the accuracy of the current algorithms for our specific types of data, and to develop tools for detecting various audio triggers, optimizing run length parameters using expert ground truth on looks, and calculating latency from audio triggers to gaze onset, among other tasks. These tools will be used for assessing gaze behavior in children with autism spectrum disorder.

## INTERNS NEEDED
3 students total, 1 or 2 BS + 1 or 2 MS

## PREREQUISITES
Knowledge of audio or image processing and/or machine learning is desirable.